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TITLE : PRODUCTION OF DIMETHYL ETHER

ABSTRACT : PURPOSE: To prevent deposition of carbon for a long period of time, enhance catalyst activity and depress by-producing of impurities by using alumina catalyst containing oxide of group IIIa metal in production of the subject compound by dehydrating methyl alcohol in vapor phase.

CONSTITUTION: In a production of dimethyl ether useful as substitute of fluorocarbon (aerosol propellant) having problem of environmental pollution by dehydrating methyl alcohol in vapor phase, oxide of Sc, Y or La-series in group IIIa elements or Ac-series elements, etc., preferably at least one metal selected from Y, La, Ce, Nd, Sm and Eu is contained in an alumina catalyst in an amount of 0.005-80wt.%, preferably 0.5-20wt.% of total weight of the catalyst. Deposition of carbon is completely prevented for a long period of time by using said catalyst and also catalyst activity at low temperature is enhanced, further, by-production of hydrocarbon such as methane inducing loss of the aimed compound in distillation is steeply reduced, thus the aimed compound is obtained in economically and industrially advantageously.

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